

THE NAUTILUS

Vol. 56

April, 1943

No. 4

OBSERVATIONS ON MARINE MOLLUSCA, WITH DESCRIPTIONS OF NEW SPECIES

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During the past several months, a number of interesting observations on marine mollusks, including some new species, have come to my attention as a result of dredging and shallow water collecting. Dredging was done off Virginia Key (Dade County), with W. A. Royce and Homer V. Geib, in July, 1941, and off Palm Beach (Palm Beach County) in 70 fathoms in September, 1941.

CYPHOMA INTERMEDIA Sowerby.² Plate 14, figure 27.

Previously, no student has had the opportunity to examine the living animal of this species, and consequently, for a considerable time its generic status was uncertain; because of its shell characters, it naturally alternated between *Cyphoma* and *Simnia*. A living specimen, which survived for a considerable time after capture, was taken from a gorgonian dredged from seventy fathoms off Palm Beach, and the following characters were noted:

Shell somewhat immature, but typical of the species, very pale flesh colored; mantle light buff, palest in the median area with a marginal dark strip, and another similar strip near its attachment to the body, heavily and regularly spotted with dark reddish brown; spotting less dense over the median light area, where the spots are a trifle diffused; edge of the mantle with a fine white border broadly but shallowly scalloped on the inside; siphon dark reddish brown, flared as in *Cyphoma mcgintyi* Pilsbry; foot, head, and tentacles a rather light brown or fawn color, the tentacles somewhat darker; foot the same color, with dark brown radiating stripes. The radula is typical for the genus, and is similar to *Cyphoma gibbosa*.

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² Pilsbry, H. A., and T. McGinty, Nautilus 53: 1, p. 1.

PECTEN (CHLAMYS) MILDREDAE Bayer.³

In my original description of this shell, I considered it as a variety of the well known *Pecten imbricatus* Gmelin. After not a little additional study and consideration, I have deemed it advisable to raise this to full specific rank. I still believe, however, its nearest affinity to be *P. imbricatus*, as indicated by its similar scheme of ribbing (not number of ribs), its cupped scales, its external and especially its internal coloration, and the large size reached by adult individuals, as I have previously stated. The largest *Pecten sentis* rarely even approaches the size reached by a full grown *Pecten imbricatus* or *P. mildredae*; the commonest color phase of *P. mildredae* is the same as the usual color form of *P. imbricatus*, although it may also occur in brilliant red, purple, and pure white, as *P. sentis* does: this is as far as the similarity between these two goes.

PECTEN (LYROPECTEN) EULYRATUS, sp. nov. Plate 14, figure 28.

Shell small, subcircular, thin, compressed; auricles broad, unequal, byssal notch moderately large, with six teeth in the etenolium; sculpture consisting of fifteen raised, somewhat squarish ribs on the upper valve; two or three radial threads in the interstices, and concentrically sculptured by very fine lines of growth; auricles with five or six radial striae; lower valve with sixteen squarish, elevated ribs, interstices a trifle smaller than the ribs; concentric sculpture of fine growth lines; auricles with about five rather broad radial riblets, finely squamose, crossed by lines of growth. Color dirty white, yellowish at the umbones and on the auricles, marked by zigzag lines and flecks of opaque, snowy white, and scattered fawn colored flecks; under valve obscurely but similarly marked. Alt. 20.5 mm., lat. 20.0 mm., diam. 5.0 mm., hinge line 15.0 mm.

Taken from Biscayne Bay (Dade County), Florida, by Mr. W. A. Royce, who probably has done more intensive collecting in this rich field than any other collector. The type is in his cabinet. This shell may be distinguished from the allied *Lyropecten antillarum* Récluz by its greater number of narrower, higher ribs, and somewhat greater compression.

PECTEN (LYROPECTEN) KALLINUBILOSUS, sp. nov. Plate 14, figs. 30, 31, 32.

Shell rather large, sub-circular, rather inequivalve, heavy; auricles broad, unequal; upper valve sculptured by fourteen

³ Bayer, Ted, Nautilus, 55: 2, page 46, plate 3, f. 16, 17.

smooth, moderately broad ribs, the interstices between which are of slightly lesser width than the ribs; lower valve with the same number of ribs, in this case the interstices being a trifle larger than the ribs; concentric sculpture obscure, consisting merely of fine growth lines; auricles sculptured by rather fine radiating threads; byssal aperture rather ample, with five strongly developed teeth in the ctenolium. Color white, mottled and clouded with a rather light purplish brown, the marginal three-eighths being marked the heaviest; toward the umbones there is an indication of tawny yellowish, and three of the ribs on the upper valve are largely of this color: the central rib, and the third rib from it on either side. On the lower valve, which is lighter in color, the ribs are marked with a lighter purplish brown and the interstices are almost entirely white. The auricles are also white, marked with purplish brown and flecks of opaque white. The interior is white, with the dark exterior color showing through at the edges where the shell is thin. Alt. 36 mm., lat. 38.5 mm., diam. 15 mm., hinge line 27.5 mm.

Gulf of Mexico, off the region of Saint Marks, Florida, in about twenty fathoms, *fide* Joseph M. Hall, Sarasota. Type in his collection.

MUREX (POIRIERIA) MULTISPINOSUS Sowerby.

Recently, a specimen referable to this species was brought to my attention. This was collected from about two hundred meters of water off Japan. This record materially increases the range of the species, since it was previously known from Cebu, Philippines, only. The specimen agrees very nicely with the original description, but the figure of the type⁴ shows a smaller aperture, rather lower spire, and longer canal. This might easily be the fault of the figure, for there is no point of separation in the description, which follows:

"Testa fusiformis, antice producta, postice conica, sordide albida; spira elato-conica, gradata, ad apicem papillaris, luteo-fusca, leviter obliqua; anfractus $6\frac{1}{2}$, primi $1\frac{1}{2}$ (apicales) laeves, rotundati, caeteri obtuse angulati, spiraliter obscure lirati, obtuse bicarinati, longitudinaliter undulatim eximie lamellati, varicibus 9-10 aculeatim spinosis instructi; anfractus ultimus supra convexus, infra rostratus; rostrum elongatum, rectiusculum, supra spinosum, infra laevigatum; apertura ovata, intus laevis. Long. 23, lat. 13 mm."

⁴Sowerby, G. B. Proceedings of the Malacological Society, volume VI, page 8, 1904-5.

Several Floridian marginellids have been contributing more than their share to the taxonomic miseries of the student of Florida mollusks, and have consequently led to no little confusion in identification. The name *Marginella carnea* has been used rather promiscuously to include several distinct forms.

MARGINELLA CARNEA D. Humphreys Storer. Plate 14, figs. 17, 18.

"Shell oblong, of a beautiful flesh color; below the middle of the lowest whirl crossed transversely by a whitish band, commencing at the exterior margin of the right lip, and losing itself upon the columella: right lip thick, white, indistinctly denticulated within, and continued in mature shells to the apex of the spire, which it partially or entirely covers. Aperture narrowed. Four folds upon the columella. Inhabits Key West, near the United States Barracks." ⁵

This is Doctor Storer's original description of this beautiful shell. In addition, the color is a rather orange shade, which fades out as the outer lip is approached. The callus from the outer lip is clear or white, and is not noticeable. Likewise it is very obscure on the columellar area. The species is found rather abundantly from the region of Cape Florida southward throughout the Florida Keys. The specimens illustrated are from the ocean side of Key Largo, near Dove Creek. Width, 10.75 mm., length, 18.00 mm.

MARGINELLA AMABILIS John H. Redfield. Plate 14, figure 23.

"*M. amabilis* is larger and more elongate than *M. carnea*, and the rich flesh-colored tinge which the back of the shell exhibits, is arranged in three bands in the former, while in the latter only two are evident. The junction of the spire and lip is less shouldered in *M. amabilis*, and the lip is usually marked with two brown spots. In short, it is as closely related on the one hand to *M. oblonga* Swains. as it is to *M. carnea* Storer on the other, and has near affinities also to *M. guttata* Dillwyn." ⁶ Length, 0.75 inch,

⁵ Storer, D. Humphreys, Boston Journal of Natural History, vol. I, article xxiv, page 465, plate 9, figures 3 and 4, 1837.

⁶ Redfield, John H., Annals of the Lyceum of Natural History of New York, volume V, page 225, 1852.

(20 mm). Breadth, 0.46 inch, (12 mm). A very old, worn example measured 25 mm. long and 14 mm. broad.

The back of the shell is a rather light flesh color, not orange, as in the following species, *M. roosevelti*. The coloring of the dorsal region fades before the outer lip is reached. The callus is milky white, and the spire, although partly covered, is well produced. The illustrated specimen is from the collection of Dr. T. Van Hyning, of the Florida State Museum, and was taken in the Gulf of Mexico off the Cedar Keys.

MARGINELLA ROOSEVELTI Bartsch and Rehder.⁷

The shell is large, ovate and shining, with the dorsal part brilliant orange with two faint pale spiral bands. Shell marked by five reddish brown spots; one at the apex, one at the back of the columella a little above the lip, two on the outer lip, and one at the base. Length of type, 23.0 mm., major diameter 13.3 mm.

This species is broader than *M. amabilis*, and the spire is much lower. So far as I know, there have been no Florida examples taken, but specimens of *Marginella amabilis* have been confused with it, and so identified.

MARGINELLA OBLONGA Swainson.⁸

Shell somewhat pyriformly oblong, flesh colored, tinged and obscurely three-banded with fawn, spotted above and below, spire small, scarcely exerted, callous, whorls sloping at the upper part, then rather gibbous, more or less attenuated towards the base; lip thickened, white, indistinctly spotted with fawn red.

MARGINELLA EVELYNAE, sp. nov. Plate 14, figs. 24, 25.

Shell sub-pyriform, thick, rather heavy, highly polished; outer lip thickened, indistinctly denticulate within; spire scarcely produced, nearly or quite covered by a callus from the posterior angle of the outer lip; callus also reflected back on the body whorl from the outer lip to a distance of about 1 or 2 mm., encircling the anterior canal, and also covering the columellar face; very dark flesh color, almost a coral red, which is weakest at the columella, but which extends completely to the outer lip, which is white, and unspotted; the callus is yellowish; four plaits on the columella.

⁷ Bartsch, Paul, & H. A. Rehder, *Smiths. Miscell. Coll.*, Volume 98, number 10, page 5, plate 1, figures 2 and 3.

⁸ Reeve, Lovell. *Conchologia Iconica, Marginella*. (Swainson, *Zool. Illustr.* ser ii, no. 9, plate xlv, f. 1.)

The type measures: Long. 16 mm., width, 10.5 mm., contained in the author's collection; paratypes in the collections of Mr. and Mrs. E. S. Vail, Daytona Beach, and W. A. Royce, Miami.

Holotype:	Length	16.0 mm.,	Width	10.5 mm.	
Paratype:		18.0,		12.0	Royce
Paratype:		17.5,		11.0	
Paratype:		17.0,		11.0	Vail
Paratype:		17.0,		11.0	Vail
Paratype:		16.0,		10.25	Vail

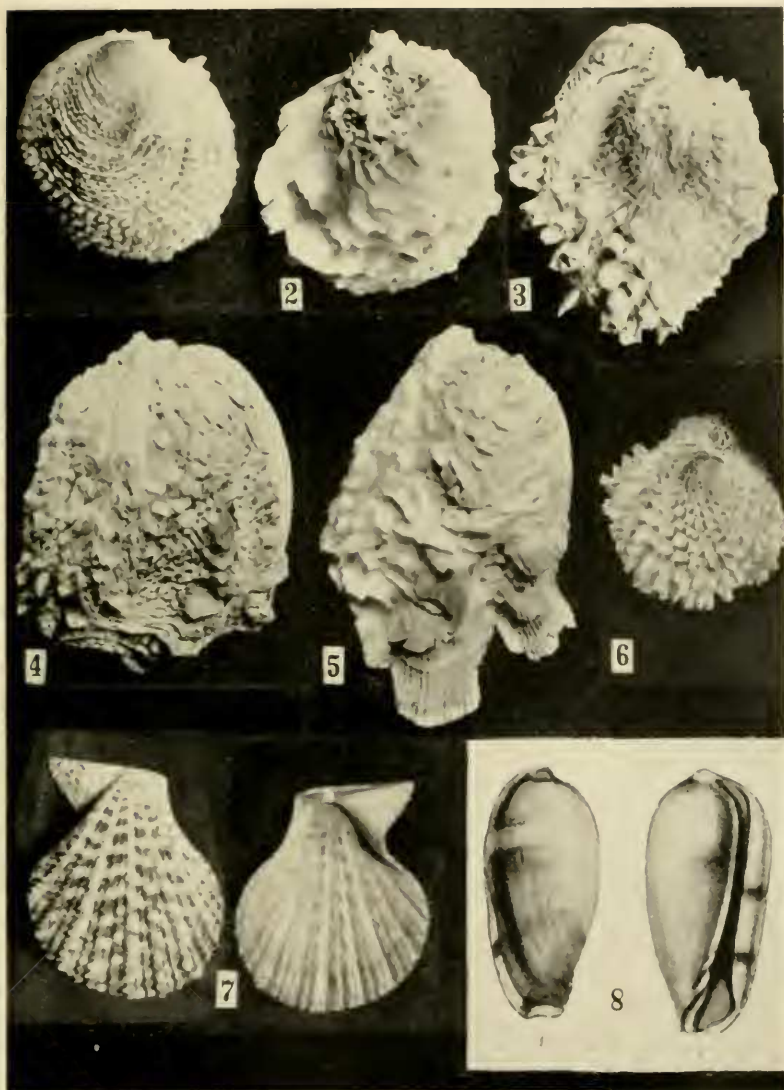
This table indicates the uniformity in dimensions of specimens of this species. All the specimens we have seen are from the type locality, Hillsborough Inlet, east Florida. *M. evelynae* differs from *M. carnea* in that it is more pyriform, darker, and lacking in the transverse white band of that species. Occasionally a hint of a paler zone is seen. The shell is named for Miss Evelyn E. Gross.

MARGINELLA NOBILIANA, sp. nov. Plate 14, figs. 19, 20.

Shell slightly pyriform oblong, rather heavy, very highly polished; outer lip thickened, indistinctly denticulated toward the basal part; spire slightly exerted, partially or entirely covered by a pale fawn callus; callus 1-2 mm. wide reflected back from the outer lip, present but not noticeable on the columellar face, ill defined at its outer margin. Color dark flesh tint with one transverse whitish band anterior to the middle, and another, more obscure, at the shoulder; lip white, unspotted, callus white except at the apex and base, where it is pale fawn; the flesh color of the body whorl fades out to white before the outer lip is reached. Four distinct plaits are present on the columella. Length of type, 22 mm., width 13 mm.

The type was dredged from seventy fathoms off Palm Beach, Florida, and is in the author's collection; illustrated paratype from the collection of Dr. T. Van Hyning, The Florida State Museum, others in the Royce collection.

This species differs from *M. evelynae* in being consistently larger, with a much less pronounced shoulder, and consequently less pyriform shape. The color is somewhat lighter, and two whitish bands are present. From *M. carnea* it differs in color, being more pink, and in having two pale bands instead of one; in shape it differs in being larger and less slender. We have seen no specimens from shallow water. The species is named for Mr. Noble Mason. Measurements of the type lot are as follows:



Figs. 1, 2, *Chama lactuca*. Fig. 3, *C. congregata*. Fig. 4, *Pseudochama radians variegata*. Fig. 5, *Pseudochama* sp. Fig. 6, *Chama florida*. Fig. 7, *Pecten mildredae*. Fig. 8, *Marginella oblonga*.